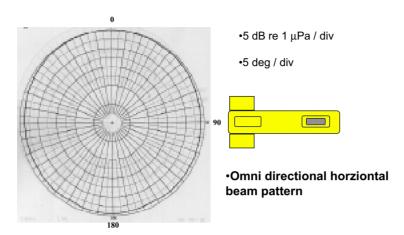


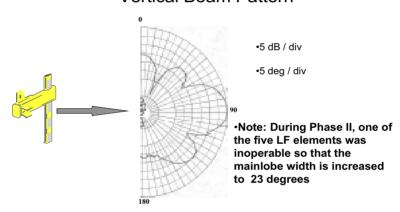




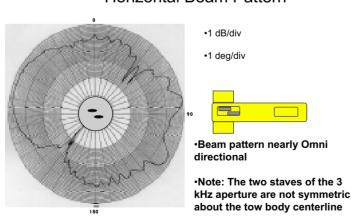
Measured TVDS Low Frequency Horizontal Beam Pattern



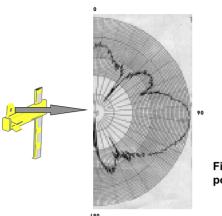
Measured TVDS Low Frequency Vertical Beam Pattern



Measured TVDS Mid Frequency Horizontal Beam Pattern



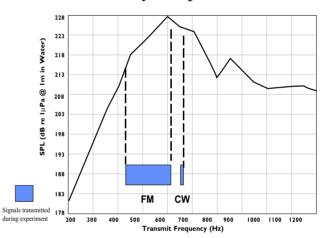
Measured TVDS Mid Frequency Vertical Beam Pattern



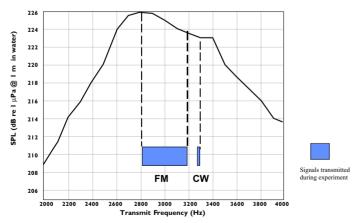
- •1 dB/div
- •1 deg/div

Fine measurements are not possible with 9000lb towbody

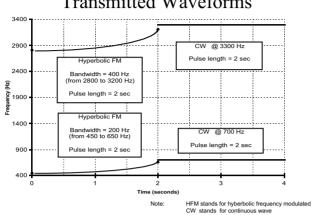
TVDS Low Frequency Array Response Curve



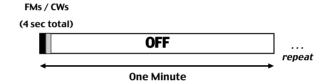
TVDS MF Array Response Curve



SWAC 4
Transmitted Waveforms



SWAC 4
Repetition Rate

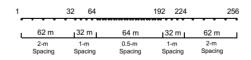


- The one minute repetition rate results in a 6.7% duty cycle.
- Simultaneous transmission of signals in the LF and MF bands.

SACLANTCEN Horizontal Towed Array Receivers

Low Frequency Array

Length = 252 m
DI = 21 dB
of Phones = 128
Beam Spacing ~ 1° @ 90°
Anti-alias Filter = 360 - 1860 Hz



Length = 5.6 m

DI = 15 dB

of Phones = 32

Beam Spacing ~ 5 @ 90°

Anti -alias Filter = 1 - 3.8 kHz

